METHOD AND APPARATUS FOR PROCESSING A NETWORK MANAGER COMMAND IN A COMMUNICATION NETWORK

ABSTRACT OF THE DISCLOSURE

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A network element, network switch, and/or a network element includes a control layer implemented over a physical layer. The network element, switch, and/or manager includes firmware to support particular processing to automate the establishment, modification, and/or deletion of communication links within the communication network, which includes processing that begins by generating a network manager command regarding a communication link between a $1^{\rm st}$ port and a $2^{\rm nd}$ port of the communication network. Upon receiving the command, the affiliated network element determines the type of network manager command and, when the network manager command is a command to establish a link, determines a network path between the $1^{\rm st}$ port and the $2^{\rm nd}$ port. Next, the affiliated network element generates a network element command regarding the link between the $1^{\rm st}$ and $2^{\rm nd}$ ports based on the determined network path and provides the network element command to the next network element in the determined network path. When the next network element is a

termination link element (e.g., a termination node), the network element allocates its resources to support the link between the $1^{\rm st}$ and $2^{\rm nd}$ ports and produces an acknowledgment signal, which is propagated back to the network manager.